AMSAT News Service Weekly Bulletins
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From: Dave Cowdin <cowdin@pogo.den.mmc.com>
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Newsgroups: local.amsat
Date: Sun, 12 Dec 1993 17:19:59 -0700 (MST)

SB SAT @ AMSAT $ANS-345.01
AO-13 FACES LONG ECLIPSE PERIODS

HR AMSAT NEWS SERVICE BULLETIN 345.01 FROM AMSAT HQ
SILVER SPRING, MD DECEMBER 11, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-345.01

AO-13 Experiences Long Solar Eclipse Which Affect Transponder Operations
James Miller (G3RUH) of the AO-13 Command Team reports that because of the long duration of the solar eclipse periods that AO-13 is experiencing, they have been forced to severely curtail transponder operations. Some of the eclipse periods have been as long as 2 hours. Battery bus voltage has become so low that the net affect has been that there has been no battery charging from orbit to orbit. The safety threshold on the battery bus voltage is currently set 12.6 volts. When the bus voltage drops below 12.6 volts, the on-board computer shuts down the beacon and brings all the other subsystems on AO-13 to a "low-power" state. Currently, with the trans-ponders and telemetry beacons turned-off, the total current consumption on AO-13 is around 1 ampere. In attempt to remedy this low battery voltage problem, the Command Team has made an spacecraft attitude re-adjustment to Bahn Longitude 245 degrees and a Bahn Latitude of -5 degrees. But under the current solar eclipse circumstances, even this has not been sufficient to solve the problem of low battery voltage. So it was necessary to take even further steps including turning off all transponder operations on AO-13 until between Friday December 10 and Monday December 13, 13-DEC-93 around 03:28 UTC. It is hoped that this will bring AO-13 through this difficult time period, however, there is no guarantee that the above actions will be enough. It should be noted that AO-13's batteries are now 5 years old and the Command Team feels that is may be necessary to take a close look at the battery charging software and presets to determine if they need to be adjusted for the age of the batteries.

It is requested that all AO-13 users keep a close "ear" to the telemetry beacons which can be heard on a downlink frequency 145.812 MHz or 2400.646 MHz for the latest information on the transponder schedule.

The Command Team is always interested in hearing from the user any "constructive feedback" about AO-13 transponder operations.

The AO-13 Command Team ccurrnetlu consists of the following:

  Peter DB2OS @ DB0FAU
  James G3RUH @ GB7DDX
  Graham VK5AGR @ VK5WI

[The AMSAT News Service (ANS) would like to thank G3RUH for the information which went into this bulletin item.]

/EX
SB SAT @ AMSAT $ANS-345.02
IO-26 SUFFERS OBC CRASH

HR AMSAT NEWS SERVICE BULLETIN 345.02 FROM AMSAT HQ
SILVER SPRING, MD DECEMBER 11, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-345.02

IK2OVV Explains the IO-26 On-Board-Computer (OBC) Crash

After 45 days of uninterrupted BBS service on IO-26, on 8-DEC-93 at approximately 11:30 UTC, ITAMSAT IO-26 suffered a crash during a pass over Europe. IO-26 is now in an undefined status, with its trasmitter on but no MBL telemetry; the Command Team will try to regain control of the satellite in the next passes over Europe. The cause of the crash is still unclear; the Command Team is investigating on some new software used to access the BBS services. In the past, some other MICROSATs crashes were due to bugs found in the user software. ITAMSAT Command Team, while recommending users not to uplink to the satellite at this time, would like to receive reports about IO-26, especially regarding the presence of just the HDLC flags on the downlink or some sort of telemetry, either MBL or PHT style. However, after examining the memory dumps taken from IO-26, Alberto Zagni (I2KBD) and Harold Price (NK6K) have decided to begin the uploading of the high-level software to restore IHT (ITAMSAT Housekeeping Task) capability. The cause of the crash is still unknown; I2KBD and NK6K are working on the memory dumps, but the crash destroyed part of the internal logs kept by the high-level software. Since the crash happened as one of the Ground Command Stations in Milan was uplinking to the satellite using a new ground software (which has not yet been fully tested), there is chance that this was the cause of the crash. The ITAMSAT Command Team has decided not to turn the BBS on after the reloading of the software; the Team will start some Whole Orbit Data (WOD) collection in order to fully optimize the energy budget onboard the satellite. This will enable IO-26 to have higher power settings on the downlink. It is estimated that the high-level software will be working by this soon; stay tuned on the downlink for any news!

The ITAMSAT Command Team would like to thank again Harold Price (NK6K) for the great help in debugging the memory dumps and the Eyesat Command Team for helping during the initial recovery.

ITAMSAT Command Team can be reached via Internet as i2kbd@amsat.org or ik2ovv@amsat.org, and on Compuserve HAMNET.

73 de Luca Bertagnolio IK2OVV
ITAMSAT Command Team

/EX
SB SAT @ AMSAT $ANS-345.03
AMSAT OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 345.03 FROM AMSAT HQ
SILVER SPRING, MD DECEMBER 11, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-345.03

Current AMSAT Operations Net Schedule For AO-13

AMSAT Operations Nets are planned for the following times. Mode-B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz. If, at the start of the OPS Net, the frequency of 145.950 MHz is being used for a QSO, OPS Net enthusiasts are asked to move to the alternate frequency of 145.955 MHz.

Date	UTC	Mode	Phs	NCS	Alt NCS
3-Jan-94	0200	B	160	WA5ZIB	N7NQM

Any stations with information on current events would be most welcomed. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations, are encouraged to join the OPS Nets. In the unlikely event that either the Net Control Station (NCS) or the alternate NCS do not call on frequency, any participant is invited to act as the NCS.

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Slow Scan Television on AO-13

SSTV sessions will be held on immediately after the OPS Nets a downlink on a Mode-B downlink frequency 145.960 MHz.

/EX
SB SAT @ AMSAT $ANS-345.04
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 345.04 FROM AMSAT HQ
SILVER SPRING, MD DECEMBER 11, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-345.04

Weekly OSCAR Status Reports: 11-DEC-93

AO-13: Current Transponder Operating Schedule:
L QST *** AO-13 TRANSPONDER SCHEDULE *** 1993 Nov 15-Jan 31
Mode-B : MA 0 to MA 95 ! / Eclipses, max
Mode-B : MA 95 to MA 180 ! OFF Dec 07 - 24. < duration 136
Mode-B : MA 180 to MA 218 ! \ minutes.
Mode-S : MA 218 to MA 220 !<- S beacon only
Mode-S : MA 220 to MA 230 !<- S transponder; B trsp. is OFF
Mode-BS : MA 230 to MA 256 ! Blon/Blat 240/-5
Omnis : MA 250 to MA 150 ! Move to attitude 180/0, Jan 31
[G3RUH/DB2OS/VK5AGR]

FO-20: The following is the FO-20 operating schedule:
Analog mode: 15-Dec-93 07:41 -to- 22-Dec-93 8:05 UTC
Digital mode: otherwise noted above. [JJ1WTK]

IO-26: ITAMSAT sufferred a system crash after 45 days of flawless operations. The command team is gathering data to try to determine the source of the problem. They state that the transmitter is on, but the BBS is not open.

AO-16: Operations are normal. [WH6I]

LO-19: Operations are normal. [WH6I]

KO-23: Functioning normally. There have been some questions regarding image files. When WH6I see some images on KITSAT, he trys to list them, but files on that satellite are only active for maybe 5-6 days depending on how much new material is uploaded. Therefore, by the time this status report makes it to the ANS status report, the files may be gone. Satellite image files on KITSAT have names in the form KAI?xxxx where ? is either W or N to indicate a WIDE or NARROW view image. The "xxxx" is a serial number. These files are about 350Kbytes large and can be seen in the directory in PB by hitting F4 to see the list of files generated by the satellite. They are usually in pairs with a wide and narrow view file. These files are downloaded just like anyother file. The program DISPLAY which is often up on the birds willdisplay these images, and it will display whatever there is in the xxxx.ACT file of the image, so that

you can look at a partial download and decide if it is worth pursuing. [WH6I]

RS-10: After a period of inactivity, the RS-10 QSO robot is QRV again. The downlink is approx 29.403 MHz, and uplink is +/- 145.820 MHz. If you are "into" the robot receiver, your CW from the few KHz wide passband will be retransmitted on the robot's fixed frequency. The speed of your CW response is not important; it just needs to be steadily and cleanly sent. K0BJ notes that he just changed from a vertical dipole to a J-pole. It seems so far to be about as bad with QSB as the dipole, but the J-pole did seem to peak more in the longer, low-elevation parts of the pass. The next experiment K0BJ will perform is with a turnstile antenna.

POSAT: CT1ENQ would like to inform that the Portuguese satellite (POSAT) is now prepared for amateur radio use. Please contact Portuguese AMSAT group, AMSAT-PO, for more information.

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

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Marc Grant
marcbg@netcom.com